

APPENDIX A

FINAL RULE, "TRANSPORTATION OF NATURAL AND OTHER GAS
BY PIPELINE: DAMAGE PREVENTION PROGRAM," 49 CFR 192,
DOCKET NO. PS-59

49 CFR Part 192**[Amdt. No. 192-40; Docket No. PB-80]****Transportation of Natural and Other
Gas by Pipeline; Damage Prevention
Program****AGENCY:** Materials Transportation
Bureau (MTB), Research and Special
Programs Administration, DOT.**ACTION:** Final rule.

SUMMARY: This final rule implements section 3(a)(2) of the Natural Gas Pipeline Safety Act of 1968 (49 U.S.C. 1672(a)(2)) by requiring gas pipeline operators to have or participate in a damage prevention program to reduce the risk of excavation damage to buried pipelines in populated areas. Excavation damage is the leading cause of gas pipeline accidents.**DATE:** This final rule becomes effective April 1, 1983. The delayed effective date will permit operators time to prepare for compliance by participating in programs

already in existence or to begin their own programs.

FOR FURTHER INFORMATION CONTACT: Ralph T. Simmons, 202-426-2392. Copies of the final rule and documents related thereto may be obtained from the Dockets Branch, Room 3426, Materials Transportation Bureau, U.S. Department of Transportation, 400 7th Street, SW., Washington, D.C. 20590.

SUPPLEMENTARY INFORMATION

Background

To reduce the risk of excavation damage to underground gas pipelines, the leading cause of pipeline accidents, MTB issued a Notice of Proposed Rulemaking (NPRM) (44 FR 65792; November 15, 1979) proposing to amend Part 192 by adding a new § 192.614 to require each operator of a buried gas pipeline in populated areas to establish and carry out, or otherwise participate in, a damage prevention program. Modeled after successful "one-call" programs, the NPRM set forth criteria that an operator's program would have to meet, including public notice, receipt of calls about pending excavation, and prompt response in locating and marking pipelines. The proposed rule was the initial step in complying with section 3(a)(2) of the NGPSA (49 U.S.C. 1672(a)(2)) that requires the issuance of this final rule.

Interested persons were given until February 15, 1980, to comment on the proposed amendment. One hundred and one different persons submitted comments. The comments were from gas utilities and gas transmission companies, their trade associations, State and Federal agencies, industry standard-making bodies, and consultant firms to the gas industry. Also, several comments were received from one-call systems.

In accordance with Section 4 of the NGPSA (49 U.S.C. 1673), the Technical Pipeline Safety Standards Committee (TPSSC) met in Washington, D.C., on April 15-17, 1980, to review the technical feasibility, reasonableness, and practicability of the amendment proposed in the NPRM. In general, the TPSSC favored the proposed rule, but suggested a number of modifications. A copy of the Committee's report is available in the docket. A discussion of my rejection of the views of the TPSSC is given below in the discussion of the sections of the final rule involved.

Cost Impact

The final rule is non-major under Executive Order 12291. The Order defines a major rule as one which has an annual effect on the economy of \$100

million, a significant increase in costs, significant adverse effect on the economy. As shown by the cost benefit analysis for this proceeding, this final rule will have no such impact. The final rule is not a significant rule as defined by the Department of Transportation Policies and Procedures (DOT Order 2100.5).

The Regulatory Flexibility Act (94 Stat. 1164, 50 U.S.C. 601) requires a review of a proposed regulation issued after January 1, 1981, for its effect on small businesses, organizations, and governmental bodies. Although in this case a notice of proposed rulemaking was issued prior to January 1, 1981, the effect on the segments of the public covered by the Regulatory Flexibility Act has been assessed. These regulations will not have a significant economic impact on such small businesses or organizations because they have been excepted from the final rule. While small governmental bodies who operate pipelines are not excepted from the final rule, it will not have a significant impact on them because a large number of them are already covered by one-call systems. Also the cost to small municipalities will not be great because the charge for participating in one-call system is based upon the miles of pipelines owned by the operator or the number of services; plus many of the small operators are often given a cost discount as an inducement to join to prevent any gaps from occurring in the system. Furthermore, a municipality which requires a permit for excavation activities may use its permit procedure with little additional modification to meet the requirement of § 192.614.

It is therefore certified, pursuant to section 605(b) of the Regulatory Flexibility Act, that this regulation will not have a significant economic impact on a substantial number of small entities.

Effect on State Laws

In accordance with section 3(a) of the NGPSA (49 U.S.C. 1672(a)(1)), any State may adopt additional or more stringent safety standards for damage prevention programs and linemarkers with respect to intrastate pipeline transportation as are not incompatible with the standards being established by this amendment to Part 192. However, States may not adopt or continue in force any such standards applicable to interstate transmission facilities. Therefore, any State standards governing damage prevention programs or linemarkers for intrastate pipeline transportation that meet the compatibility test of section 3(a) will not

be preempted by the new Federal standards.

Under section 5 of the NGPSA (49 U.S.C. 1674), the safety standards issued under the NGPSA generally may not be enforced by MTB against intrastate pipeline transportation in a State in which a State agency submits an annual certification stating, among other things, that it has adopted and is enforcing such standards under State law. Newly issued Federal standards that apply to intrastate pipeline transportation are enforceable by MTB under the NGPSA until a State agency adopts those standards under State law and submits another annual certification. In the case of the new damage prevention program standards, however, section 101(c) of the Pipeline Safety Act of 1979 (49 U.S.C. 1672 note) provides that the new standards "shall not apply with respect to annual certifications under section 5 during the 2-year period which begins on the effective date of such requirements." This provision allows State agencies that do not have compatible damage prevention program standards additional time they may need to adopt and enforce the new Federal standards, while continuing to participate in the certification and grant-in-aid program under section 5 with respect to the other Federal gas pipeline safety standards. In States that take advantage of this provision, the result will be to extend for up to 2 years the period within which the new Federal damage prevention program standards are enforceable by MTB with respect to intrastate pipeline transportation that is subject to the jurisdiction of those certified State agencies.

General Comments on Proposed § 192.614

1. Eighty commenters stated that to burden pipeline operators instead of excavators with regulations designed to prevent excavation damage is inequitable and results in increased cost of transportation at a questionable increase in public safety. Although it is true that by this rule MTB is requiring pipeline companies to shoulder the costs of damage prevention, while perpetrators of damage pay nothing above their liability for damages, society does expect these pipeline companies, as transporters of hazardous commodities, to take every reasonable precaution against harm to the public, regardless of the cause. This societal objective is expressed in section 3(a)(2) of the NGPSA, which requires any operator of gas pipeline facilities to participate in a damage prevention program which the Secretary determines

is being carried out in a manner adequate to assure protection; or to take steps as the Secretary shall prescribe to provide services which are comparable. Furthermore, this policy is supported by studies cited in the NPRM showing that damage prevention programs are the best way to minimize harm from excavation damage. For example, the National Transportation Safety Board has, on the basis of accident investigation and special studies, identified a direct relationship between effective excavation damage prevention programs and low excavation damage rates. In addition, as set forth in the cost/benefit study for this final rule, the program benefits to the industry as a whole outweigh the costs. For example, a reduction in excavation damage to an operator's pipeline would result in benefits to the operator by reducing the cost of repairing the damage, loss of service to his customers, and by savings in the gas which would be lost if a rupture occurs as a result of the damage. Moreover, there are societal benefits that result from fewer injuries and deaths. Because of the duty operators must meet to prevent harm to the public and because, then, "one-call" programs have proven themselves cost effective, MTB does not agree that the operator responsibility imposed by this rulemaking is inequitable.

2. Thirty commenters recommended that MTB continue to encourage States to enact legislation placing the burden of conducting a damage prevention program on both utility operators and excavators. MTB's efforts to encourage States to enact legislation were discussed fully in the NPRM, and the results of those efforts were shown to have been mixed and inconsistent. Furthermore, because participation in an acceptable State-sanctioned or State-operated program can ratify the requirements of the new rule, there should be a sufficient incentive for operators to lobby the States to enact appropriate legislation.

3. Four transmission companies and two trade associations argued that unlike distribution companies, transmission systems and gas gathering lines should not be required to have damage prevention programs, because they have relatively small amounts of pipeline in Class 3 or 4 areas. Moreover, they noted that the bulk of their Class 3 piping occurs where transmission lines pass an inhabited building or recreation center located in an otherwise rural area, as defined by 49 CFR 192.5(d)(2), and it would be impractical to run separate programs for these segments. Similarly, the TPSSC objected to applying the

proposed damage prevention program to segments of transmission pipelines in a Class 3 location solely by application of § 192.5(d)(2).

MTB recognizes the unique situation of operators who have short segments of their pipelines placed in Class 3 locations by application of the requirements of § 192.5(d)(2). In addition to transmission lines and gathering lines, there may also be distribution mains that fall into this situation. It would be impractical for an operator to develop and run or participate in a damage prevention program specifically for each short segment of its pipeline in rural areas which is in a Class 3 location as defined by 49 CFR 192.5(d)(2). In addition, a program run just for these Class 3 areas would be of little benefit because of low population and excavation activity. Therefore, the final rule excepts segments of pipelines placed in Class 3 locations solely by application of the requirements of § 192.5(d)(2), provided the pipeline is marked in that Class 3 area in accordance with 49 CFR 192.707.

Except as just discussed, MTB is of the opinion that it is just as necessary for transmission and gathering line systems in populated Class 3 and 4 areas to have a damage prevention program as it is for a distribution system. While the fewer number of transmission and gathering lines in these areas compared to distribution lines obviously has resulted in fewer accidents, excavation damage to these lines in populated areas would result in the public being placed at just as great a risk as it would be if the same damage occurred to a distribution pipeline. In fact, for transmission lines, the risk could be greater because they are normally larger pipelines and operate at much higher pressures than distribution pipelines. Also, it does not appear logical to require that a distribution main, which may traverse the same area as a transmission or gathering pipeline, meet the requirements of the damage prevention regulation and DOT require a transmission or gathering line in the same area and carrying the same product to meet the same requirement.

4. Thirty-seven commenters argued that the proposed rule was too specific and that any final rule should be written in performance language. The final rule has been written in performance language.

Operator controlled rights-of-way

In the preamble to the NPRM, MTB invited comments on the extent to which the proposed requirements should apply to systems whose operators own or have control over the property traversed by the pipelines. These operators

generally are municipalities and persons who transport gas in conjunction with renting property, such as managers of mobile home parks or public housing projects and operators whose pipeline facilities are enclosed by physical barriers restricting public access to such facilities.

There were eleven comments received on this topic. Five of the commenters stated that all operators should be covered by the proposed rule, unless they have absolute control of access to the rights-of-way and can prevent any excavation on the property without their knowledge. They reasoned that mobile home parks are often small cities with uncontrolled public rights-of-way, and that since municipally-owned systems utilize the same methods as private companies for the location of their facilities (e.g., easements or streets and rights-of-way dedicated to public use), it would not be any more appropriate to exempt them than privately-owned systems. These commenters also argued that managers of mobile home parks and municipalities generally have minimal damage prevention programs; therefore, it would lessen the effectiveness of the final rules to exempt them from coverage.

Another commenter reiterated support for "control of access" being a basis for exemption by stating that a mobile home park owner or housing project manager who can control access to his property should also be able to control excavation activities.

Several other commenters stated that all municipally-owned systems exceeding a minimum threshold of customers should be required to have a damage prevention program, while those under the minimum should be exempted from coverage. The commenters did not give the number of customers for the threshold or a rationale for the comment.

Additionally, one trade association commented that all liquefied petroleum gas (LP-Gas) operators should be exempted from coverage because it is inconceivable that any excavation work could take place without the knowledge of the LP-Gas dealer and/or the property owner. Additionally, the association said that LP-Gas systems are regularly serviced by LP-Gas truck drivers/delivery men, providing an opportunity for detection of excavation activity, and that above ground tanks or underground tank domes are visible reminders of the presence of gas lines.

MTB is aware that many segments of all types of gas pipelines and pipeline facilities in Class 3 or 4 locations are contained within physical barriers which restrict public access to the

pipelines or facilities. Such restricted access lessens the chance of excavation damage because the operator would know of any excavation activity within the barriers and would take steps to protect the gas pipeline and facilities. The final rule, therefore, excepts pipelines to which access is physically controlled by the operator.

MTB is not persuaded that an operator's control over its right-of-way short of physical control of access is sufficient reason to except pipeline facilities from the damage prevention program. Without physical control of entry, mere ownership of a right-of-way is not a sufficient deterrent to excavation damage since it is too easy for excavation to occur without the operator's knowledge, making it even less likely that an operator would voluntarily mark the pipelines near a planned excavation. Thus, no further exceptions than physical control of right-of-way, as discussed above, are adopted in this final rule.

Similarly, even though a municipality may control excavation activity on its right-of-way within its jurisdiction through permits or licensing procedures, MTB does not have any information which shows that their exercise of control by the municipalities has resulted in a lessening of damage to pipelines by excavation activities. As proposed in the NPRM, MTB has made municipally-owned facilities subject to the final rule.

Although a strong argument can be made in support of including LP-Gas and master meter systems in the final rule, MTB does not now have sufficient statistical data to clearly demonstrate that a certain number of incidents caused by outside force damage will be prevented by applying the final rule to LP-Gas and master meter systems.

In the future, if adequate statistical data is available to clearly demonstrate the value of the benefits of requiring LP-Gas and master meter systems to have a damage prevention program, MTB will reconsider requiring them to have a damage prevention program at that time. In the meantime, MTB chooses not to impose on LP-Gas and master meter systems, a requirement which is of unproven value, and there systems are excepted from compliance as set forth in § 192.614(c)(4).

The following portion of their preamble discusses specific sections of the proposed rule that received significant comment.

Section 192.614(a)—Definition of "Excavation Activity"

One commentator recommended expanding the definition of "excavation

activity" to mean: "Any operation in which any structure, earth, rock, or other mass of material in or on ground is moved, including without limitation, wrecking, razing, grading, trenching, digging, ditching, drilling, augering, tunneling, scraping, cable plowing, rock plowing, and pile driving activity."

MTB believes the definition of "excavation activity," as given in less detail in the NPRM, is broad enough to cover all the earth-moving activities that can reasonably be expected to cause damage to a pipeline. Therefore, MTB has not adopted the commentator's recommendation for the final rule. However, for emphasis, the final rule does include in the definition the removal of above ground structures.

Section 192.614(b)(1)—Identification of Excavators

Fifty-one commenters thought that the term "semiannually" should be changed to "annually" with respect to how often an operator must determine who in an area is engaging in excavation activities. The reasons given were: impossible to do semiannually because of the numerous number of contractors involved; the requirement is excessive; most one-call systems and operator programs now do it once a year, there would not be any greater benefit from doing it semiannually, but it would increase the cost; and the mobility of the contractors make it impossible to keep track of them.

Six commenters asked that the proposed determination requirement be deleted.

MTB agrees that to require semiannual determination of the names of persons who are normally engaged in excavation or demolition would be excessive. The mobility of the people engaged in such operations would make compiling and keeping up-to-date such a list a monumental and expensive task in larger metropolitan areas. Furthermore, MTB believes that if an operator has or participates in a program which includes the features of notifying the excavation and demolition industry and the general public in the operator's Class 3 and 4 areas of operations of the program's existence, advising them how to get information from the program, and encouraging them to participate, that the large majority of persons engaged in excavation or demolition activities will become aware of the program and participate.

MTB does not agree with the commenters who recommended that the proposed § 192.614(b)(1) be deleted if a program of informing a certain segment of the public is to be successful, the informer must be able to identify those

who are to be informed. For this reason, MTB believes that it is necessary for each operator to determine who is most likely to engage in activities that may cause damage to pipelines so that information concerning the damage prevention program may be sent to them directly.

Also, the Gas Research Institute study, "Prevention of Third Party Damage to Gas Pipelines Final Report for 1980", on page 41 states: The five major utilities, their employees and their subcontractors account for well over 50 percent of the damage incidents. . . . When the associated road construction and general construction damage incidents are included . . . well over three-fourths of the damages are caused by personnel who are professionally and regularly involved in excavation activities on or near . . . the utility trenches." Given the above, it follows that the majority of the outside force damage to gas pipelines is done by a well defined group of professionals which is readily identifiable and once identified should remain fairly constant. Thus, after the initial identification process, it should be relatively simple to keep a current list of excavators for any given area.

Therefore, MTB has amended the proposal in the final rule (§ 192.614(b)(1)) to permit the operator more flexibility of action in determining those persons who are normally engaged in excavation activities in his Class 3 and 4 area of operation. In the final rule, a period for updating lists of excavators is not prescribed. Rather, an operator will have to make an initial determination, and then keep the findings current.

Section 192.614(b)(2)—Notification of damage prevention program

Fifty-two commenters opposed the proposed requirement that excavators be notified of the damage prevention program by newspaper ads and direct mailings. Their reasons were that the proposal was restrictive in that it would not allow the operator to pick the best method for his operation; that most notices would be lost in large city newspapers and newspaper ads are expensive; that most of the damage is done by fly-by-night contractors, and newspaper ads would not reach them; and that the edr would probably be ineffective because of the mobility of excavators and much of the work being done by out-of-towners.

Two commenters stated that the proposal was vague, inasmuch as the required content of the notice was not furnished. They also said a required

program is unnecessary since posted signs and public records provide notice to the excavators of the location of the pipeline.

In addition, commenters objected to the proposed semiannual notification of excavation and the public as too inflexible.

MTB agrees with the commenters' statement that the proposal as written may have been too restrictive and would not have allowed the flexibility necessary for operators to develop information programs that would promote the desired response. MTB also concurs that newspaper ads could be expensive, and might not produce the desired response from the public or would not provide the reinforcement of the message that other, more permanent types of notification might. MTB also agrees that the transient nature of the excavation industry makes it unlikely that some members would be aware of notices or ads placed in local newspapers. In consideration of these factors, MTB has modified the proposal in the final rule (§ 192.614(b)(2)) to require that the public be notified of the program functions and that known excavators be given actual notice of the program. Operators may use any methods of notification that are designed to achieve the desired results in their Class 3 and 4 areas of operation. The frequency of notification would be based on the extent to which excavators and the public are aware of the program. As awareness increases, as judged by participation, fewer notices could be given.

MTB does not agree with the commenters who stated that the proposal was vague because it did not contain the required content of the notice. If MTB were to spell out the specific wording a notice must contain, the final rule would be too rigid, inasmuch as different wording may be desirable in different locations and sections of the country because of the types of operations being performed and methods of informing the public which may be available to the operator. Furthermore, to specify the wording the notice must contain would not be in keeping with MTB's objective of writing this final rule in performance language.

MTB does not agree with the statement that posted signs and public records provide sufficient notice to the excavator of the location of the pipeline. This has not proven true in the past, and MTB does not have any indications to the effect that posted signs and public records will prove to be any more effective in the future. While a sign may alert an excavator to the presence of a pipeline, it normally does not mark the

location as precisely as temporary marking in a "one-call" program. Also, public records such as permits, licenses, and right-of-way information will not provide the precise location with the necessary reliability for an excavator's use to prevent accidental damage to a pipeline. For these reasons, the commenters' recommendations were not adopted for the final rule.

Section 192.614(b)(4) (i), and (ii) (A) and (B)—Providing information

There were thirty-six commenters who opposed the proposed requirements of § 192.614(b)(4)(i) that callers be told immediately if there are pipelines in the area of planned excavation. The reasons for their opposition were that most one-call systems do not have the capability of furnishing the required information, and to impose such requirements would destroy the one-call systems as they are presently constituted; that it is not feasible to expect that the one-call systems could maintain current records of the utility location in their area; and that no responsible operator would accept the responsibility of permitting third parties to give out facility locations because of the possible liability involved.

seventy-two commenters were opposed to the proposed requirements of § 192.614(b)(4)(ii)(A) regarding the details about a pipeline to be given to callers. Their arguments were that most of the details would not be available to the person receiving the call; that providing the required information at the first call would encourage excavation to begin work without waiting for field marking; and that giving the pressure in the pipeline could mislead excavators to believe that damage to a low pressure line is not as hazardous as damage to a high pressure line.

Thirteen commenters opposed § 192.614(b)(4)(ii)(B), as proposed, regarding telling callers the type and time of marking to be provided. Their reason was that the surface at the work site determines the markings to be used, and the surface(s) involved could not be determined by telephone.

After review of the comments received and further investigation of the issues in § 192.614(b)(4) (i) through (ii)(B), MTB agrees with the commenters that it would not be appropriate to require that detailed information about pipeline location, characteristics, and type or time of marking be given out upon receipt of notice of planned excavation. Indeed, giving details about pipeline upon receipt of notice could be counterproductive for public safety. However, since comments on this section opposed basically the time at

which information is given to excavators and not the giving of information, MTB still believes that persons planning to engage in excavation activities should be told before such activities begin whether there are pipelines in the area and if so, the type of temporary marking that is to be provided and when the marking will be completed. Giving out this information early in the process should deter excavators from forging ahead with the work should they feel a "one-call" system has not been responsive to their calls. Therefore, MTB has incorporated in the new § 192.614(b)(4) these notification provisions of paragraph (b)(4) of the NPRM, but revised them to permit the information to be given at some time after notice of excavation is received.

Section 192.614(b)(5)(i)—Temporarily

Two commenters stated that strict compliance with the proposed requirement to mark pipelines before excavation begins would be impossible as the operator has no control over when work commences.

MTB does not wholly agree with the commenters' statement. True, the operator has no control over when work commences, but a main purpose of the damage prevention program is to facilitate preconstruction cooperation and planning between the operator and excavators. MTB believes that a well planned and operated damage prevention program will facilitate preconstruction communication between parties, thereby reducing the chance that excavation activities will commence before the pipelines in the area of the proposed activities are properly located and marked or that marking of pipelines would be too far in advance of excavation.

The proposal in subparagraph (b)(5)(i) of the NPRM has been modified in the final rule, however, by qualifying the intent that marking be done before excavation begins with the words "as far as practical." This change recognizes that operators may not in every instance be able to complete marking prior to the beginning of excavation activities because of the vagaries of persons doing the excavation.

Section 192.614(b)(5)(ii)—Inspection requirements

1. Sixty-one commenters were opposed to the proposal to inspect pipelines during and after excavation activities. Their reasons were that field inspections of all pipeline excavations during and after excavation is unnecessary, unrealistic, and

economically unfeasible; the operator should be allowed to determine which excavation should be inspected based upon his experience as to the probability of damage occurring; the support of the pipeline is a factor in only a small number of cases; it is the excavator's responsibility to notify the operator of any damage caused by his activities; and the proposal would place the burden of liability on the operator and not on the excavator where it belongs.

Many said that inspection would be excessively expensive. One commenter estimated it would cost his company over 4 million dollars a year to comply; another estimated cost at three million dollars a year, and several estimated their cost would be from two million to three million dollars a year.

Five commenters were opposed on the basis that inspection of the pipeline should continue to be the responsibility of the excavator as currently required by the Occupational Safety and Health Administration under 29 CFR Part 1926, Subpart P, section 651(a).

After reviewing the comments made on the proposed requirements of subparagraph (b)(5)(ii), MTB believes that most of the commenters interpreted the proposal to mean that an inspector must be on the job site at all times that excavation activities are taking place. This was not MTB's intent. MTB's intent was to require inspection during and after excavation activities to the extent that is necessary to verify the integrity of the pipeline.

MTB recognizes the responsibility of the excavator to notify the operator of any damage he may cause to the pipeline. MTB's concern is that the pipeline may have its coating damaged and its cathodic protection interfered with in such a manner that it would negate the protection afforded the pipeline. Also small dents, scratches, or gouges could occur or its support be undermined so that excessive stress could be set up in the pipeline that could cause failure at a later date. These causes of failure may not be recognized and reported by even the most conscientious excavator as being significant enough to be reported to the operator; therefore, inspection of the pipeline is necessary. This is shown in the following examples. The National Transportation Safety Board's special study, "Prevention of Damage to Pipelines" Report Number: NTSB-PSS-73-1 states that a 2-inch high-pressure gas main, which was apparently damaged during sewer construction several months before the accident, leaked gas and caused an explosion completely destroying a house, killing a

mother and two children, and injuring seven other children.

The study further quotes a Prince Georges County, Maryland, ad hoc committee as stating that "... statistics show that hits still seem to occur at an alarming rate after lines have been located and marked prior to digging. This would indicate that contractors and subcontractors must assume a lion's share of the blame since their workmen not only damage the lines, but according to County Fire Department and gas company records, fail to exercise good judgment to safeguard the public in many cases. Such workmen often conceal their damages and proceed with 'work as normal.'" Another NTSB report (Number P-78-44) on an accident which occurred at Cherokee, Alabama, states that the support of a cast-iron gas main broke due to the erosion of its soil support where a sewer line had been installed perpendicular to the gas main resulting in an explosion which destroyed a house and killed one occupant.

Also, when blasting is being performed that could harm pipeline in surrounding areas, it is necessary that the pipelines in such areas be leak surveyed immediately after the blasting has occurred to ensure their integrity, since the effect of blasting on pipeline is largely unpredictable. This unpredictability results from the many variables associated with blasting, such as soil condition, type of soil, size of charges used, type of charges used, skill of the personnel doing the blasting, the proximity of the blasting to the pipeline, and the delay sequence of the blasting charger.

In Coopersburg, Pennsylvania, five persons died and sixteen were injured when a weld on an 8-inch steel high-pressure gas main was cracked by blasting.

MTB recognizes that an operator, through experience in dealing with excavators in his area, should know those who are conscientious in avoiding damaging pipeline and in reporting any significant damage. Also, operator should be able to determine from the type of excavation activities being conducted at a particular site, the possibility of damage occurring to the pipeline, and the degree and type of inspection necessary to verify the integrity of the pipeline.

For the above reasons, the final rule in subparagraph (b)(6) has been modified to make MTB's intent clear. The final rule permits the operator to determine which excavation activities should be inspected and the extent of inspection necessary except, that for blasting

activities which could be harmful to nearby pipelines, leakage surveys are mandatory.

The commenters' concern over excessive cost due to performing the proposed inspections appears to stem from their belief that full-time inspection of all excavation activities would be required. This conclusion is supported by the fact that the estimates submitted by the commenters were based on the cost of construction inspection presently being conducted by their respective companies. This cost was projected to show the anticipated cost of full-time inspection of all excavation activities. Also, the potential benefits shown by the commenters to be derived from these expenditures were based on major damage being done to the pipeline, such as a puncture of the pipeline or a break in the pipeline. They did not consider the benefits which would be derived from preventing less immediate failures by discovering and correcting less serious damage to the pipeline as expressed in the above discussion of MTB's reasons for requiring inspection.

Since the final rule does not require full-time inspection of all excavation activities and permits the operator to use reasonable judgment in determining which excavation activities to inspect and the extent of inspection required, MTB does not believe that unreasonable additional cost will result from the final rule.

Section 192.614(c)—Program Criteria

MTB proposed that operators would not have to run their own damage prevention programs if they voluntarily or by State or local law participate in a public service program that "essentially" meets the criteria proposed under § 192.614(b) for an operator-run program. Four commenters requested clarification of the meaning of "essentially" meets the requirements of paragraph (b). They asked, are they minimum provisions which must be met or can they be met if State law encompasses many of the items enumerated? The intent of this proposal was to permit operators to provide damage prevention programs by participation in State, local, or voluntary public service programs which have the same fundamental characteristics as a damage prevention program defined in paragraph (b) of the notice. The word "essential" was included in the notice so that fundamentally sound programs might qualify though they did not provide every detail that was given in paragraph (b). In the final rule, however, the clarifying changes discussed above

regarding program criteria remove any uncertainty as to which public service programs meet these criteria so that the word "essentially" is not needed.

The final rule adopts the proposal regarding participation in public service programs by providing in paragraph (a) that an operator may perform any of the duties of a damage prevention program by participating in a qualified public service program. Where such a program only partially satisfies program criteria as by providing a telephone answering service, the operator would have to supplement the public service program with activities of his own to assure full compliance with all criteria. Even where a public service program purports to meet all criteria, participation alone would not relieve an operator of the duty to assure that the criteria are met. In other words, an operator would be subject to penalty for the failure of a public service program in which the operator participates to correctly carry out any aspect of the program criteria that it is performing. If a function is being performed incorrectly, it is the operator's duty to correct the situation at the public service program or otherwise take the necessary steps to perform the function to assure that his compliance responsibility is met.

Section 192.614(d)—Determining Program Effectiveness

1. Fourteen commenters concurred with the proposal that the program should be monitored, but they did not believe that the number of reported incidents by itself is a fair measure of program effectiveness. These commenters argued that the proposal did not take into account the increase in incidents that would occur due to an increase in excavation activities, that the effectiveness of programs should be measured by something other than past experience, and that the data would be so unreliable that it could not be used for statistical analysis.

One commenter stated that a measurement based on Part 191 incident reports would be meaningless because of the small number of reports that are filed.

Seven commenters stated that operators should not be subjected to further regulatory burdens of improving programs where the fault lies with excavator's failure to respond to the operator's efforts or to take the necessary precautions to protect a facility that has been properly marked.

After reviewing the comments and consideration of use of the incident and annual reports filed under Part 191, it was determined that Part 191 reports would not be a reliable basis for

measuring program effectiveness because excavation activities may increase or decrease from one year to the next. In a year of low excavation activity, a lesser amount of pipeline would be exposed to risk, and less damage would probably occur, thus making the damage prevention program appear to be very effective. In a year of high excavation activity, the reverse could be true. Also, the number of calls requesting the location and marking of pipelines is not a reliable measure, because many of the calls could be originated by excavation whose activities take place in an area where there are few, if any, pipelines, resulting in a large number of calls but with a small amount of pipeline being placed at risk. In contrast, a small number of calls could be from excavators whose activities are in areas of a high density of pipelines, thereby placing a large amount of pipeline at risk. Another consideration was the miles of pipeline in an operator's area. But, the same problem exists with the use of miles of pipeline as does with the use of number of calls received.

MTB believes that there are insufficient reliable data available at this time to allow operators to make a reliable annual determination of the effectiveness of their damage prevention program and to take remedial action based on that determination. For the above reason, the proposed requirement that operators determine annually the effectiveness of their damage prevention programs and take action on that determination has not been incorporated in the final rule.

MTB believes that a method for monitoring the effectiveness of a damage prevention program is necessary, and will continue its efforts to develop a reliable method of doing so. MTB would welcome assistance from interested persons in developing such a method.

Section 192.707—Line Markers

Eight commenters opposed the proposed exemption of pipelines covered by a damage prevention program from the permanent line marking requirement of § 192.707. The reason most often given was that line marking serves many other useful purposes, such as aid to firefighting units.

The purpose of the line marking requirement under § 192.707 is to alert potential excavators of the existence of underground pipelines and their general location. While there may be other benefits, they did not form a basis for the rule when adopted, and thus cannot be used to justify its retention. MTB

believes that where damage prevention programs exist, there is no need for line markers, because the damage prevention program is a more effective means of protecting underground pipelines against excavation damage. Although line markers may serve a secondary purpose of aiding other public bodies, this is not sufficient justification to impose costly duplicate requirements on the operators. For these reasons, the commenters' recommendation was not adopted for the final rule.

PART 192—TRANSPORTATION OF NATURAL AND OTHER GAS BY PIPELINE: MINIMUM FEDERAL SAFETY STANDARDS

For the reasons set out in the preamble, 49 CFR Part 192 is amended as follows:

1. A new § 192.614 is added to read as follows:

§ 192.614 Damage prevention program.

(a) Except for pipelines listed in paragraph (c) of this section, each operator of a buried pipeline shall carry out in accordance with this section a written program to prevent damage to that pipeline by excavation activities. For the purpose of this section, "excavation activities" include excavation, blasting, boring, tunneling, backfilling, the removal of above ground structures by either explosive or mechanical means, and other earth moving operations. An operator may perform any of the duties required by paragraph (b) of this section through participation in a public service program, such as a "one-call" system, but such participation does not relieve the operator of responsibility for compliance with this section.

(a) The damage prevention program required by paragraph (a) of this section must, at a minimum—

(1) Include the identity, on a current basis, of persons who normally engage in excavation activities in the area in which the pipeline is located

(2) Provide for notification of the public in the vicinity of the pipeline and actual notification of the persons identified in paragraph (b)(1) of the following as often as needed to make them aware of the damage prevention program:

(i) The program's existence and purpose; and

(ii) How to learn the location of underground pipelines before excavation activities are begun.

(3) Provide a means of receiving and recording notification of planned excavation activities.

(4) Provide for actual notification of persons who give notice of their intent to excavate of whether there are buried pipelines in the area of excavation activity and, if so, the type of temporary marking to be provided and how to identify the markings.

(5) Provide for temporary marking of buried pipelines in the area of excavation activity before, as far as practical, the activity begins.

(6) Provide as follows for inspection of pipelines that an operator has reason to believe could be damaged by excavation activities:

(i) The inspection must be done as frequently as necessary during and after the activities to verify the integrity of the pipeline and

(ii) In the case of blasting, any inspection must include leakage surveys.

(c) A damage prevention program under this section is not required for the following pipelines:

(1) Pipelines in a Class 1 or 2 location.

(2) Pipelines in a Class 3 location defined by § 192.5(d)(2) that are marked in accordance with § 192.707.

(3) Pipelines to which access is physically controlled by the operator.

(4) Pipelines that are part of a petroleum gas system subject to § 192.11 or part of a distribution system operated by a person in connection with that person's leasing of real property or by a condominium or cooperative association.

2. Section 192.707(b)(2)(ii) is revised to read as follows:

§ 192.707 Line markers for mains and transmission lines.

(b) . . .

(2) . . .

(ii) Where a damage prevention program is in effect under § 192.614; or

3. The table of sections is amended by adding a new § 192.614 titled "Damage prevention program."

(49 U.S.C. 1672; 49 CFR 1.53, Appendix A of Part 1)

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L. D. Santman,

Director, Materials Transportation Bureau.

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